



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10 057,536	01/25/2002	Heinz Weiss	08913-US	2358

7590

05/15/2003

Deere & Company
John Deer Road
Moline, IL 61265-8098

EXAMINER

NGUYEN, HANH N

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 05/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/057,536

Applicant(s)

WEISS, HEINZ

Examiner

Nguyen N Hanh

Art Unit

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-7 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 4,8 and 9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

DETAILED ACTION

Claim Objections

1. Claim 7 is objected to because there is no antecedent basis for "the shifting device". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3,5 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Parvin (U.S 1,522,742).

Regarding claim 1, Parvin discloses a transverse flux drive having a first component (stator B and b in Fig. 1) and a second component (rotor E and e) rotatable with respect to the first component, and first and second transverse flux motors coupled between the first and second components, each motor having a plurality of magnetic pole elements (electromagnet poles of rotor) and a plurality of armature elements (of stator), wherein: at least one of said pole elements and armature elements of one of said motors being axially movable to a position wherein it is magnetic uncoupled from its corresponding armature or pole element (Fig. 1 and Col. 1, lines 9-30).

Regarding claim 2, Parvin also discloses a transverse flux drive wherein: the first component comprises a non-rotating stator and the second component comprises a rotor which rotates relative to the stator.

Regarding claim 3, Parvin also discloses a transverse flux drive wherein: the pole elements of each motor are coupled to rotate with the rotor.

Regarding claim 5, Parvin also discloses a transverse flux drive wherein: the armature elements are inductively coupled by a single continuous, exciter winding (Fig. 2).

Regarding claim 6, Parvin also discloses a transverse flux drive further comprising: a shifting device (J) is coupled to one of the pole or armature elements and is operable to shift said element axially during operation of the transverse flux drive.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parvin in view of Bartholomaus et al.

Regarding claim 10, Parvin shows all limitations of the claimed invention except showing the transverse flux drive wherein the shifting device is a hydraulic shifting device.

However, Bartholomaus et al. discloses an electrical device comprising: a hydraulic shifting device (30 in Fig. 1 and Col. 7, lines 3-10) for the purpose of moving armature bar (abstract).

Since Parvin and Bartholomaus et al. are in the same field of endeavor, the purpose disclosed by Bartholomaus et al. would have been recognized in the pertinent art of Parvin.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Pavin by using a hydraulic shifting device as taught by Bartholomaus et al. for the purpose of moving the magnetic pole elements.

Regarding claims 8 and 9, Bartholomaus et al. also show a housing which encloses a hydraulic chamber which slidably receives a piston (32)

4. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parvin in view of Shkondin.

Regarding claim 10, Parvin shows all limitations of the claimed invention except showing the transverse flux drive further comprising: a wheel hub for coupling to a wheel.

However, Shkondin discloses a traverse flux drive further comprising: a wheel hub (1 in Fig. 8) for coupling to a wheel for the purpose of forming a drive wheel for electric car (abstract).

Since Parvin and Shkondin are in the same field of endeavor, the purpose disclosed by Shkondin would have been recognized in the pertinent art of Parvin.

It would have been obvious at the time the invention was made to a person having an ordinary skill in the art to modify Pavin by using a wheel hub for coupling to a wheel as taught by Shkondin for the purpose of forming a drive wheel for electric car.

Regarding claims 11 and 12, Shkondin also shows the transverse flux drive further comprising: a rim for supporting a vehicle tire (2 in Fig. 8) and the stator is connected to a vehicle axle.

Allowable Subject Matter

5. Claims 4,8,9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show a traverse flux drive comprising two pole elements of two motors are coupled to the rotor of the drive wherein one pole elements of one motor are securely fixed to the rotor and the pole elements of the second motor are axially movable with respect to the rotor and the stator of the drive includes the hydraulic device to control the axial movement of the pole elements of the second motor.

Conclusion

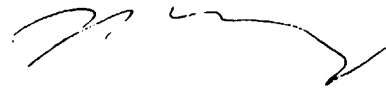
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hanh N Nguyen whose telephone number is (703) 305-3466. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3431 for regular communications and (703) 305-3431 for After Final communications.

Application/Control Number: 10/057,536
Art Unit: 2834

Page 6

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

A handwritten signature in black ink, appearing to be "J. L. ...", with a long horizontal stroke extending to the right.

HNN

May 5, 2003